

## REMARKS

Claims 1-26 are presently active, of which claims 22-26 are newly presented.

Applicant thanks the Examiner for the obvious effort spend on this matter.

A basic goal of the various claimed embodiments is to allow a collection or team of network interfaces to be defined where different network interfaces may support different various specialized processing features, e.g., encryption or some other specialized data processing capability. Ordinarily team members have to provide identical services so that data can be safely balanced across any of them without risk of incompatibilities. Thus, in order to support a desired new specialized capability, such as an on-the-NIC encryption/decryption processor, or to support a new data packaging format, protocol, etc., all network interfaces have to be upgraded to support the new specialized capability; this is potentially a very costly operation.

In claimed embodiments, such total upgrades are not necessary. If incoming or outgoing data is received for one interface requires specialized features provided by a different network interface, then that data may be provided to the different network interface to be processed by it, e.g., in one embodiment, as a "secondary" task to what that network interface was otherwise doing. That is, the other network interface may "loan" out its specialized capabilities to network interfaces not supporting that capability. In such fashion, network interface upgrades can be performed incrementally, while making a specialized capability appear supported by the entire team.

The preambles of claims 1 and 12 have been amended to clarify intent to claim such sharing of network interface capabilities. Such sharing of capabilities is not taught or suggested by the referenced portions of the cited documents.

**35. U.S.C. §102(e)**

Claims 1-2 and 20-21 stand rejected under §102(e) as being anticipated by Stevens (U.S. Patent No. 6,324,583). Applicant traverses the rejections.

**Claims 1-11**

Claim 1 recites receiving first data to be transmitted by a first network interface according to a protocol, determining the first network interface does not support the protocol, and providing the first data to a second network interface that supports the protocol and that can process the data into second data that is transmitted by the first network interface. This traversal from the first network interface to the second network interface and back to the first network interface for transmission by the first network interface is **not** taught by Stevens.

Instead, Stevens teaches some optimizing of communication between its FIG. 2 Application Stack A and a TCP/IP Stack B. As stated in its Abstract, the Stevens invention concerns interconnecting “stacks executing different protocols in the same node by means of a software implemented input/output device” (Abstract). This “is accomplished by establishing a virtual input/output device **[204]** to connect the bottom layer of the one stack to the bottom layer of the other stack.” (Summary; reference 204 added.) This is not what is claimed and therefore Applicant submits Stevens cannot anticipate the claim 1’s recited traversal of data from the first network interface to the second network interface and back for transmission by the first network interface.

Regarding the last clause of claim 1 regarding transmission by the first network interface, the Action cites Stevens as anticipating this at col. 6 lines 24-63. Applicant

submits this is an incorrect interpretation Stevens. As discussed above, claim 1 requires traversal of network data to be transmitted by the first network interface from the first network interface to the second network interface and then back to the first network interface for transmission by the first network interface. The cited portion of Stevens at col. 6 lines 24-63 does not teach this interplay in that the cited portion *only* discusses using a single network adapter, e.g., Stevens adapter 210. There is no teaching in the cited portion of data intended for Stevens adapter 210 to be first processed by another network adapter, e.g., Stevens adapter 205, for transmission by network adapter 210.

Therefore, Stevens fails to anticipate the last clause of claim 1, and based on the above, also generally fails to anticipate, teach or suggest the claimed embodiment. Consequently, Applicant submits Stevens cannot anticipate claim 1 as suggested.

#### Claim 2

Regarding the rejection of claim 2, notwithstanding its allowability by depending from allowable base claim 1, claim 2 recites "presenting said first and second network interfaces to a protocol stack as being a homogeneous team of network interfaces." There is no such teaching in Stevens. Stevens teaches interfacing two network stacks, and does not discuss presenting network adapters 205, 210 as a homogenous team.

#### Claims 20-21

Claim 20, in the spirit of claim 1, has data that is to be transmitted by a first network interface but that first requires processing by a second network interface. Claim 20 also recites a network interface team. As discussed above with respect to claim 1, Stevens

virtual device used to interconnect stacks fails to anticipate the recited back-and-forth of data between network interfaces, and does not teach adapter teams.

Consequently, Applicant submits claims 20-21 are allowable for at least the same reasons as for claim 1 discussed above, and also for failure to teach adapter teams.

**35. U.S.C. §103(a)**

Claims 3-5 stand rejected as being obvious over Stevens in view of Cashman (U.S. Patent No. 6,438,678). Claims 6-8 and 10 stand rejected as being obvious over Stevens in view of Cashman and Ramaswamy (U.S. Patent No. 6,424,621). Claims 9 and 11 stand rejected as being obvious over Stevens in view of Cashman and Kimber (U.S. Patent No. 6,222,855). Claim 10 stands rejected (for a second time) as being obvious over Stevens in view of Ramaswamy. (10 is twice rejected in Action ¶¶13, 20.) Claim 12 stands rejected as being obvious over Stevens in view of Kimber. Claims 13-15 and 19 stand rejected for the same reasons as claims 3-5, 9, which Applicant takes interprets to mean Stevens in view of Cashman and Kimber. Claims 16-18 stand rejected as being obvious over Stevens in view of Kimber, Cashman and Ramaswamy.

Applicants traverse these rejections as each relies on an interpretation of Stevens that, as discussed above, Applicant respectfully submits is incorrect. Assuming for the sake of argument that the cited features of Cashman, Ramaswamy, and Kimber teach as suggested by the office (their teachings have not been analyzed), the cited features do not cure the deficiencies of Stevens. Consequently the suggested combination of references fails to teach or suggest the various claimed embodiments.

In addition, Applicant notes that dependent claims 2-11, 13-19, and 21 are also allowable for at least the reason as depending from an allowable base claim.

### **New Claims 22-26**

New independent claim 22 recites a method for sharing processing capabilities of members of a system of network interfaces among the system members. In particular, if data, e.g., incoming or outgoing, is received for a first network interface, and the data is configured in a way unsupported by the first network interface, then the data is offloaded to a second network interface which secondarily processes the data for the first network interface. Applicant submits such capability sharing and secondary processing is not taught or suggested by the referenced portions of the documents cited by the Office, and therefore new claim 22 is allowable.

New dependent claim 23 introduces further limitations not taught or suggested by the documents of record.

New independent claim 24 recites another variation of network interface capability sharing across a team of NICs, and is allowable for at least the reasons discussed above. Claim 24 in particular recites transmission by a first NIC to a recipient of data that has been secondarily processed by a second NIC. Such secondary NIC processing is not taught or suggested by the documents of record and therefore for this reason also claim 24 is allowable.

New dependent claim 25 introduces further limitations not taught or suggested by the documents of record.

New dependent claim 26 recites providing a virtual NIC aggregating specialized capabilities offered by various network interfaces of the team of network interfaces. Such aggregation is not taught or suggested by the documents of record and therefore for at least this reason claim 26 is allowable.

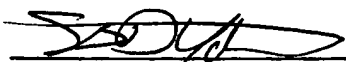
**CONCLUSION**

Based on the foregoing, it is submitted that that all active claims are presently in condition for allowance, and their passage to issuance is respectfully solicited.

The Examiner is requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Respectfully submitted,

Date: July 10, 2003

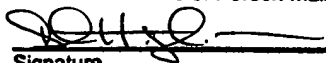
  
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